

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): H. MIWA, et al

Serial No.: Not yet assigned

Filed: March 29, 2004

For: CLOCK SYNCHRONIZED NON-VOLATILE MEMORY DEVICE

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.97 & 1.98**

MS DD

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

March 29, 2004

Sir:

In the matter of the above-identified application, this Information Disclosure Statement is being submitted with the following citation as specified in 37 CFR §1.97(d).

"A copy of any patent, publication or other information listed in an Information Disclosure Statement is not required to be provided if it was previously cited by or submitted to the Office in a prior application, provided that the prior application is properly identified in the statement and relied upon for an earlier filing date under 35 U.S.C. §120."

Applicant(s) are submitting herewith a copy of Form PTO-1449 which list documents cited in parent application(s) Serial No. 10/223,347, filed August 20, 2002; Serial No. 10/223,220, filed August 20, 2002; which is a continuation of application Serial No. 10/020,873, filed December 19, 2001; which is a continuation of application Serial No. 09/817,021, filed March 27, 2001, now U.S. Patent No. 6,366,495; which is a continuation of application

Serial No. 09/583,949, filed May 31, 2000, now U.S. Patent No. 6,256,230; which is a continuation of application Serial No. 09/287,187, filed April 6, 1999, now U.S. Patent No. 6,111,790; which is a continuation of application Serial No. 09/053,494, filed April 2, 1998, now U.S. Patent No. 6,038,165; which is a continuation of application Serial No. 08/860,793, filed July 9, 1997, now U.S. Patent No. 5,889,698.

It is respectfully requested that this information disclosure statement be considered by the Examiner.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus Deposit Account No. 01-2135 (501.35478CX22) please credit any excess fees to such deposit account.

Respectfully submitted,



Carl I. Brundidge
Registration No. 29,621
ANTONELLI, TERRY, STOUT & KRAUS, LLP

CIB/jdc
(703) 312-6600

FORM PTO-1449 U.S. Department of
Commerce (Rev. 4/92) Patent and Trademark
Office

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

501.35478CX22

SERIAL NO.

Not yet assigned

APPLICANT

MIWA, et al

FILING DATE

March 29, 2004

GROUP

2818

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILE IF APPLICABLE |
|---------------------|-----------------|-------|----------------|-------|----------|-----------------------|
| | 4 9 6 4 0 7 9 | 10/90 | Devin | | | |
| | 5 3 6 5 4 8 6 | 11/94 | Schreck | | | |
| | 5 4 1 2 6 0 1 | 5/95 | Sawada et al | 365 | 185.03 | |
| | 5 8 3 1 9 0 0 | 11/98 | Miyamoto | 365 | 185.03 | |
| | 5 7 4 5 4 0 9 | 4/98 | Wong et al | 365 | 185.03 | |
| | 5 5 5 5 2 0 4 | 9/96 | Endoh et al | 365 | 189.01 | |
| | 5 1 5 1 3 8 7 | 9/92 | Brady et al | 437 | 191 | 4/30/92 |
| | 5 0 8 4 4 1 7 | 1/92 | Joshi et al | 437 | 192 | 3/13/92 |
| | 5 0 5 9 5 5 4 | 10/91 | Spinner et al | 437 | 193 | 6/23/91 |
| | 5 1 7 2 3 3 8 | 12/92 | Mehrotra et al | | | |
| | 5 1 3 8 5 7 6 | 8/92 | Madurawe | | | |
| | 5 4 8 7 0 3 6 | 1/96 | Akaogi et al | 365 | 185.23 | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | ABSTRACT YES |
|-----------------|------|---------|-------|----------|-----------------|
| 5 9 1 2 1 6 9 6 | 7/84 | Japan | | | XX |
| 4 2 3 8 1 9 6 | 8/92 | Japan | | | |
| 4 5 7 2 9 4 | 2/92 | Japan | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| |
|---|
| Digest of Technical Papers, ATP 2.1: A 3.3V 128Mb Multi-level NAND Flash Memory for Mass Storage Applications, T. Jung, et al., ISSCC96/Session 2/Flash Memory/Paper TP 2.1, 1996 IEEE International State Circuits Conf. |
| Betty Prince, "Semiconductor Memories", 1983, Wiley, 2 nd Edition, pp. 620-621. |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. I copy of this form with next communication to applicant.

| | | |
|---|--|---------------------------------------|
| FORM PTO-1449 U.S. Department of Commerce (Rev. 4/92) Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) | ATTY. DOCKET NO. 501.35478CX22 | SERIAL NO. Not yet assigned |
| | APPLICANT MIWA, et al | |
| | FILING DATE March 29, 2004 | GROUP 2818 |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | | | | | | | | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|---|---|---|---|---|---|--|-------|------------------|-------|----------|-------------------------------|
| | 5 | 6 | 7 | 7 | 8 | 6 | 8 | | 10/97 | Takahashi, et al | 365 | 185 | |
| | 5 | 7 | 6 | 8 | 1 | 9 | 3 | | 6/98 | Lee, et al | 365 | 185.25 | |
| | 5 | 7 | 5 | 7 | 6 | 9 | 9 | | 5/98 | Takeshima, et al | 365 | 185.24 | |
| | 5 | 7 | 9 | 6 | 6 | 5 | 2 | | 8/98 | Takeshima, et al | 365 | 185.03 | |
| | 5 | 7 | 5 | 4 | 4 | 6 | 9 | | 5/98 | Hung, et al | 365 | 185.03 | |
| | 5 | 7 | 4 | 8 | 5 | 3 | 3 | | 5/98 | Dunlap, et al | 365 | 185.19 | |
| | 5 | 7 | 5 | 4 | 4 | 7 | 5 | | 5/98 | Bill, et al | 365 | 185.25 | |
| | 5 | 6 | 8 | 7 | 1 | 1 | 4 | | 11/97 | Khan | 365 | 185.03 | |
| | 5 | 7 | 6 | 8 | 1 | 8 | 8 | | 6/98 | Park, et al | 365 | 185.03 | |
| | 5 | 4 | 4 | 0 | 5 | 0 | 5 | | 8/95 | Fazio, et al | 365 | 45 | |
| | 5 | 4 | 5 | 0 | 3 | 6 | 3 | | 9/95 | Christopherson | 365 | 205 | |
| | 5 | 1 | 6 | 3 | 0 | 2 | 1 | | 11/92 | Mehrotra, et al | 365 | 185 | |
| | 5 | 7 | 6 | 8 | 1 | 9 | 1 | | 6/98 | Choi, et al | 365 | 185.22 | |
| | 5 | 5 | 6 | 6 | 1 | 2 | 5 | | 10/96 | Fazio | 365 | 45 | |
| | 5 | 2 | 0 | 0 | 9 | 2 | 0 | | 4/93 | Norman, et al | 365 | 185 | |
| | 5 | 6 | 7 | 5 | 5 | 3 | 7 | | 10/97 | Bill, et al | 365 | 185.22 | |
| | 4 | 8 | 6 | 0 | 2 | 5 | 8 | | 8/89 | Fruhauf, et al | 365 | 194 | |

| | |
|-----------------|------------------------|
| EXAMINER | DATE CONSIDERED |
|-----------------|------------------------|

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of
Commerce (Rev. 4/92) Patent and Trademark
Office

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

501.35478CX22

SERIAL NO.

Not yet assigned

APPLICANT
MIWA, et al

FILING DATE
March 29, 2004

GROUP
2818

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|-------|----------------|-------|----------|-------------------------------|
| | 5 9 1 5 1 0 5 | 6/99 | Farmwald et al | | | |
| | 6 0 3 8 1 6 5 | 3/00 | Miwa | 365 | 185.03 | |
| | 4 4 3 5 7 8 6 | 3/84 | Tickle | 365 | 185 | |
| | 5 6 9 4 3 5 7 | 12/97 | Mori | 365 | 185.03 | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLAS S | ABSTRACT | |
|--|-----------------|-------|---------|-------|--------------|----------|----|
| | | | | | | YES | NO |
| | 6 2 6 4 9 3 | 2/87 | Japan | | | XX | |
| | 6 2 3 4 3 9 8 | 2/87 | Japan | | | XX | |
| | 6 2 2 5 7 6 9 9 | 11/87 | Japan | | | XX | |
| | 6 2 2 9 8 9 9 9 | 12/87 | Japan | | | XX | |
| | 6 3 2 7 6 7 9 1 | 11/88 | Japan | | | XX | |
| | 2 4 0 1 9 8 | 2/90 | Japan | | | XX | |
| | 2 2 6 0 2 9 8 | 10/90 | Japan | | | XX | |
| | 3 2 3 7 6 9 2 | 10/91 | Japan | | | XX | |
| | 4 5 7 2 9 4 | 2/92 | Japan | | | XX | |
| | 4 1 8 4 7 9 4 | 7/92 | Japan | | | XX | |
| | 4 2 3 8 1 9 6 | 8/92 | Japan | | | XX | |
| | 0 6 1 3 1 8 8 1 | 5/94 | Japan | | | XX | |
| | 0 6 1 9 5 9 8 7 | 7/94 | Japan | | | XX | |
| | 0 6 2 6 7 2 8 5 | 9/94 | Japan | | | XX | |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of
Commerce (Rev. 4/92) Patent and Trademark
Office

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

501.35478CX22

SERIAL NO.

Not yet assigned

APPLICANT
MIWA, et al

FILING DATE
March 29, 2004

GROUP
2818

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|-------|---------------|-------|----------|----------------------------------|
| | 5 3 2 7 3 9 0 | 7/94 | Takasugi | 365 | 230 | |
| | 5 4 7 3 5 7 0 | 12/95 | Sato et al | 365 | 221 | |
| | 6 0 1 1 8 8 0 | 1/00 | Tani et al | 382 | 312 | |
| | 6 3 6 6 4 9 5 | 4/02 | Miwa et al | 365 | 185.03 | |
| | 6 4 5 9 6 1 4 | 10/02 | Miwa et al | 365 | 185.03 | |
| | 6 0 4 4 0 3 1 | 3/00 | Iadanza et al | 365 | 230.03 | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | ABSTRACT | |
|---|-----------------|-------|---------|-------|----------|----------|----|
| | | | | | | YES | NO |
| | 1 2 7 3 2 9 4 | 11/89 | Japan | | | XX | |
| 0 | 7 0 5 7 4 8 4 | 3/95 | Japan | | | XX | |
| 0 | 2 1 5 4 9 7 | | Japan | | | | X |
| 0 | 6 3 0 9 8 9 0 | 11/94 | Japan | | | XX | |
| 0 | 1 2 3 8 4 2 | 9/79 | Japan | | | | |
| | 1 1 3 4 7 9 3 | 5/89 | Japan | | | | X |
| | 5 2 1 0 9 9 1 | 8/93 | Japan | | | XX | |
| | 6 2 5 1 5 9 1 | 9/94 | Japan | | | | X |
| | 7 9 3 9 7 9 | 4/95 | Japan | | | XX | |
| | 2 0 4 0 1 9 8 | 2/90 | Japan | | | XX | |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | |
|---|--|---|
| FORM PTO-1449 U.S. Department of Commerce (Rev. 4/92) Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) | ATTY. DOCKET NO. 501.35478CX22 | SERIAL NO. Not yet assigned |
| | APPLICANT H. MIWA, et al | |
| | FILING DATE March 29, 2004 | GROUP 2818 |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|-------|----------------|-------|----------|-------------------------------|
| | | | | | | |
| | 5 2 9 7 0 2 9 | 3/94 | Nakai et al | 365 | 238.5 | |
| | 4 6 9 2 8 8 6 | 9/87 | Miki et al | 364 | 718 | |
| | 5 4 2 2 8 5 8 | 6/95 | Mizukami et al | 365 | 233 | |
| | 5 5 3 9 6 8 8 | 7/96 | Yiu, et al | 365 | 185.14 | |
| | 5 5 4 4 0 9 9 | 8/96 | Hara | 365 | 185.19 | |
| | 5 6 7 7 8 6 9 | 10/97 | Fazio, et al | 365 | 185.03 | |
| | 5 6 1 5 1 5 3 | 3/97 | Yiu, et al | 365 | 185.19 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | ABSTRACT | |
|-----------------|-------|---------|-------|----------|----------|----|
| | | | | | YES | NO |
| 0 6 2 8 2 9 9 2 | 10/94 | Japan | | | XX | |
| 0 7 1 6 1 8 5 2 | 6/95 | Japan | | | XX | |
| 0 6 0 7 6 5 8 6 | 3/94 | Japan | | | XX | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|--|--|
| | |
| | |
| | |

EXAMINER**DATE CONSIDERED**

EXAMINER: Initial if citation is considered, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.